

CLAIM OR CLAIMS

We claim:

1. Information storage media for improving the accuracy of a machine tool, comprising:
computer software storage media having computer-readable information recorded to provide tickle feed repositioning commands to a machine controller associated with the machine tool from an external software controller, wherein the repositioning commands correct for a position error of a machine tool end effector and are based upon a comparison of measured true position of the end effector and a digital definition representation of a part.
2. The information storage media of claim 1, further comprising a standard deviation control protocol for determining the rest position of the end effector.
3. The information storage media of claim 1 further comprising a first code portion that uses least squares fit algorithms for providing a first order, linear approximation of the position error.
4. The information storage media of claim 2 further comprising a first code portion that uses least squares fit algorithms for providing a first order, linear approximation of the position error.
5. Information storage media, comprising:
computer software storage media having computer-readable information recorded to provide trickle feed, delta correction commands in machine media from an external software controller to a machine controller to correct for a position error determined by a comparison of the true position of a machine tool under the control of the machine controller and the position that the machine controller locates the machine tool following machine media positioning commands derived from an engineering specification of a part, the delta correction commands moving the machine tool if the

position error exceeds a predetermined offset threshold, wherein the software controller records the correction commands for later analysis of machine wear.

6. The information storage media of claim 5 further comprising a first code portion that uses least squares fit algorithms for providing a first order, linear approximation of the position error.

7. A machine tool system for improving positioning accuracy of a machine tool, comprising;

- (a) a machine having a machine tool and a machine controller; and
- (b) a software controller connected to the machine controller for executing the information storage media of claim 1.

8. A machine tool system for improving positioning accuracy of a machine tool, comprising;

- (a) a machine having a machine tool and a machine controller; and
- (b) a software controller connected to the machine controller for executing the information storage media of claim 5.

9. A method for improving the accuracy of a machine having a machine controller for guiding movement of a machine tool, comprising the step of:

providing trickle feed delta correction commands in machine media to the machine controller from an external software controller that records the correction commands for later analysis of machine wear, wherein commands are provided when a comparison of the true position of a machine tool under the control of the machine controller and the position to which the machine controller locates the machine tool following machine media derived from an engineering specification of a part exceeds a predetermined offset threshold,

wherein the software controller uses a standard deviation protocol to determine the rest position when the machine tool tops following movement.